

DISCUSSION OF THE AMENDMENT

Claims 1-4 and 6-27 are active in the present application. Claims 1, 6 and 8 have been amended to limit the thickness of the light transmitting part to 0.1-3 mm and to state that the amount of the water-soluble particle contained in the light transmitting part is from 0.5 to less than 5% by volume. Support for the amendment is found on pages 9 and 14 of the specification. Claims 18-27 are new claims. Support for the new claims is found in the original claims and on pages 26 and 28.

No new matter is added.

REMARKS

Independent Claims 1, 6 and 8 now state that the light transmitting part has a thickness of 0.1-3 mm and contains a water-soluble particle in an amount of from 0.5 to less than 5% by volume. Applicants submit the amendment to the claims obviates the rejection under 35 U.S.C. §102(e) over Shiho (US 2004/0118051) and the rejection of the claims as obvious over Hasegawa (US 2002/0173231).

Applicants submit that Shiho and Hasegawa, separately or combined, do not disclose the polishing pad of the present claims and request withdrawal of the rejections.

The Office rejected Claim 1 as obvious in view of Hasegawa. It appears that the Office is asserting that Hasegawa discloses an embodiment wherein the prior art water-soluble particle may be present in an amount of less than 10% by volume. In support of the rejection the Office points to paragraph [0048] of Hasegawa. A portion of portion [0048] is reproduced below for convenience:

An amount of the above-mentioned water-soluble particle contained in a polishing pad is preferably 10-90% by volume, more preferably 15-60% by volume, further preferably 20-40% by volume based on 100% by volume of the total amount of the water-insoluble matrix material and the water-soluble particle. When the content of the water-soluble particle is less than 10% by volume, a sufficient amount of pores are not formed, and a removal rate tends to be lowered.

The Office interprets this disclosure of Hasegawa as a description of an embodiment of the prior art invention wherein less than 10 volume % of the water-soluble particle may be present. The Office states:

Unlike the claimed invention, Hasegawa does not teach the water-soluble particle as not less than 0.1% by volume and less than 5% by volume. However, Hasegawa points out that when the content of the water-soluble particle is less than 10% by volume, which encompasses the claimed range, a sufficient amount of pores are not formed and a removal rate tends to be lowered. Since the benefits and drawbacks are known, one ordinary skill [sic] would be motivated to select either greater

than 10% or less than 10% depending on which
benefits/drawbacks they are willing to accept.

See the paragraph bridging pages 2 and 3 of the February 9 Office Action.

Applicants traverse the Office's assertion that Hasegawa discloses that there is any benefit to using less than 10 volume % of the water-soluble particle. Hasegawa makes it explicitly clear that when the amount of the water-soluble particle is less than 10 volume %, "a sufficient amount of pores are not formed." Hasegawa discloses the importance of pores throughout the Hasegawa disclosure, e.g., see for example paragraphs [0038]; [0042]; [0046]; [0047]; [0050]; [0057]; [0070]; and [0079]. Thus, Hasegawa makes it clear that the pores formed by the water-soluble particle are an important aspect of the prior art disclosure. Hasegawa even states that when the amount of the water-soluble particle is less than 10% by volume, an insufficient number of pores are formed and the ability of the prior art polishing pad to remove substrate material is lessened. Applicants submit that this description is in no way a disclosure of any advantage or benefit. In fact, to the contrary, this is a clear teaching away from any embodiment wherein the amount of the water-soluble particle is less than 10% by volume.

Hasegawa does not disclose any embodiment of the prior art invention wherein the amount of the water-soluble particle is less than 10% by volume. Applicants submit the Office's interpretation is not reasonable.

The Office's policy with respect to prior art that "teaches away" from a claimed invention is well-established and is well documented in the M.P.E.P. For example, M.P.E.P. §214405(III) provides guidance on how an Examiner should treat a prior art teaching away when judging a *prima facie* case of obviousness. For example:

A *prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. (citations omitted)

Here, Hasegawa makes it clear that using less than 10% by volume of the water-soluble particle leads to the formation of a polishing pad that has an insufficient number of pores and results in a slower removal rate. Applicants submit that this is a material teaching away from using less than 10 volume % of the water-soluble particle when considered in view of Hasegawa's disclosure that the formation of pores is an important aspect of the prior art polishing pad. Hasegawa even discloses that using less than 10 volume % of the water-soluble particle leads to a lessened removal rate. Applicants submit that the information of record in the present application provides no support for any assertion that those of ordinary skill in the art would be motivated to lessen the removal rate of the substrate and/or find such a property desirable in a polishing pad.

Applicants thus submit that the Office's rejection of Claim 1 in view of Hasegawa ignores Hasegawa's express teaching away from the claimed invention. The rejection is therefore not supportable and should be withdrawn.

Applicants draw the Office's attention to the Declaration of Yukio Hosaka under 37 C.F.R. §1.132 submitted concurrently herewith. The Declaration provides data comparing the polishing performance of polishing pads having transmitting parts of different thickness and different amounts of water-soluble particles. As stated in the Declaration:

From the above description, it is my opinion that a polishing pads having a content of water soluble particles in an amount of Q5-5% by volume and a light transmitting part thickness of Q1-3 mm is superior in terms of the properties of transmission, polishing performance and the life of the pad and it was also confirmed that extremely significant and selective effects can be obtained with the polishing pad meeting these requirements.

Applicants thus submit that polishing pad of the present claims provides significantly superior performance as evidenced by the fact that the claimed polishing pad provides improvements in all three of transmission, polishing performance and pad life in comparison to polishing pads that are outside the present claim limitations.

Applicants draw the Office's attention to new Claims 18-27 which state that the light transmitting part and the substrate are made of the same matrix materials and water-soluble particle however the light transmitting part has a significantly lower amount of the water soluble particle in comparison to the substrate.

For the reasons discussed above in detail, Applicants submit that all now-pending claims are in condition for allowance. Applicants request the mailing of a Notice of Allowance to acknowledge the patentability of the presently claimed subject matter.

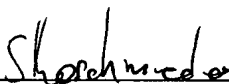
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